

Dana Meadows Award Presentation Ceremony 2014

Announcement Text by Joel Rahn
Chairman of the Dana Meadows Award Committee

The Dana Meadows Award is given for the best paper, *by a student*, presented at the Annual Conference. The Award was first presented at the Atlanta Conference in 2001, to honor the life and work of Dana Meadows. Dana pursued a long and brilliant career in education and research focussed on a systems approach to social and environmental issues. From her contributions to *Limits to Growth* to her later writings in *The Global Citizen*, Dana was an inspiration to generations of students and researchers in System Dynamics.

The Award is instituted by the Society to bring recognition to the very best student work and thereby, to inspire students to contribute to the growing body of theory and applications of System Dynamics inspiration that Dana demonstrated throughout her career.

The Dana Meadows Award is funded through an endowment established by the Society, initially by a generous donation from Jane and Allen Boorstein to launch the Award in 2001, and by many subsequent donors whose support the Society gratefully acknowledges. Currently, the winner receives a cash prize of \$750 as well as conference registration plus travel expenses (up to a combined maximum of \$750).

The members of the selection committee this year were Erich Zahn, John Sterman, Krystyna Stave, Özge Pala, Tom Fiddaman and Richard Dudley.

The DMA Committee receives manuscripts from across the wide spectrum of topics presented at the Conference and seeks to recognise a representative sample of award-worthy papers (that also meet the criterion of excellence). The mix of short-listed topics inevitably varies from year-to-year and a balanced view of award-worthy work can best be seen in the history of winners, rather than in a snapshot of a single-year.

Before announcing the winner let me offer some general comments for the benefit of the many students gathered here. First, I encourage all of you to continue submitting good work. After an initial screening, Committee members read and discuss your manuscripts carefully. In doing so we enjoy a unique and valuable ‘window’ on current student research, the best of which is very good indeed. And one piece of often-repeated advice: when you submit a paper, make sure you first read the Award guidelines very carefully - and stick to the rules as you write your manuscript!

Papers that ignore the guidelines will be deemed ineligible and are screened-out of the short-listing process.

This year our shortlist was whittled-down, fairly quickly, to the eventual winner: **The Winner in the Dana Meadows Award competition for 2014 goes to Can Sücüllü in the Department of Industrial Engineering Boğaziçi University** for a paper entitled “Behavior Analysis and Testing Software (BATS)” (co-authored with Gönenç Yücel). Among the comments of the DMA Committee were the following:

* I like very much that it offers multiple options for some of the operations in which there are always judgmental aspects and reasonable alternatives may be applied. For example, the detrending operation offers and compares different trend models including linear, quadratic, and exponential. the user can select based on knowledge of the underlying process and also assess the robustness of the results to different assumptions about the trend process.

The Behavior Space Classifier is also a novel and useful way to visualize how the qualitative behavior modes change with parameters and assumptions. It’s replicable because it’s based on the ISTS algorithm, so it takes a lot of the subjectivity out of the traditional classification of modes.

Overall, an ambitious effort to tackle a persistent issue in SD modeling - the qualitative comparison of behavior modes as a complement to the traditional measures of goodness of fit (which are also included here).

* It's a little rough around the edges, but that's what I'd expect from a piece of software under development.

There are some core features that are very useful. The two I particularly appreciate are:

- The ability to take a time series, subtract components (trend) or split it, and then run further diagnostics on the result

- The behavior mapper/classifier - I'd say this is the real star of the show. It's quite cool to be able to click on a point in a 2D map of behavior classifications and see the time series output at that point in parameter space.

This paper will be presented at the Parallel Session 449: Optimization and Analysis on Wednesday afternoon at 14h00 in the Aula Commissiekamer 3.